Amendments to the Claims

Please amend Claims 1, 4-5, 7-9, 11-15, 30, 50-51, and add new claim 53, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

1.   (Currently Amended) A method for supporting a portal application, comprising:

accepting a request, at a container on one or more web servers, from a user that interacts with a graphical user interface (GUI) of a web application at a client side;

mapping the request to a control tree factory, wherein the control tree factory [[can]] is operable to

obtain an XML stream from different sources; [[and]]

parse the XML stream into a Document Object Model (DOM) tree; and

~~processing the DOM tree and generating~~ generate a control tree in the container ~~by the control tree factory~~ from the DOM tree based on the request, wherein the control tree is a logical representation of the graphical user interface (GUI), wherein the control tree includes a set of controls, each of which controls represents at least one of a graphical element and a functional element in the GUI;

associating at least one control in the control tree with another control in the control tree using an event notification mechanism, wherein the event notification mechanism allows the at least one control to register with the another control in the control tree for events that the another control raises;

advancing the control tree through at least one lifecycle stage in a sequence of one or more lifecycles, wherein ~~the~~ at least one control in the control tree operates to be updated once the at least one control receives an event notification from the ~~interact with~~ another control in the control tree through [[an]] the event notification mechanism;

aggregating the output of each control of the set of controls in the control tree to produce a response based on the request; and

providing the response to the GUI.

2.-3.   (Canceled).

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4.   (Currently Amended)   The method of claim 1 ~~wherein the step of generating a control tree comprises~~ further comprising:
    creating a metadata representation of [[a]] the control tree; and
    generating a class to construct the control tree based on the metadata representation.

5.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    allowing the request [[is]] to be a hypertext transfer protocol request (HTTP); and
    allowing the request to originate[[s]] from a web browser.

6.   (Previously Presented)   The method of claim 1, further comprising:
    providing the response to a web browser.

7.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    advancing the control tree ~~is advanced~~ through the at least one lifecycle stage by an interchangeable lifecycle component.

8.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    allowing each one of the set of controls [[can]] to have an interchangeable persistence mechanism.

9.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    allowing each one of the set of controls [[can]] to render itself according to a theme.

10.   (Canceled).

11.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    advancing one of the set of controls ~~can advance~~ through the series of at least one lifecycle stage in parallel with another of the controls.

12.   (Currently Amended)   The method of claim 1 ~~wherein~~ further comprising:
    allowing a lifecycle stage [[is]] to be one of: init, load state, create child controls, load, raise events, pre-render, render, save state, unload and dispose.

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13.   (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing the response [[is]] to be a hypertext transfer protocol (HTTP) response.

14.   (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing controls [[can]] to raise events and respond to events.

15.   (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing each one of the set of controls [[can]] to be one of: Book, Page, Window, Menu, Layout, Portlet, Theme, Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton, TreeView, TreeViewWithRadioButtons.

16.-29. (Canceled).

30.   (Currently Amended) A machine readable storage medium having instructions stored thereon that when executed by a processor cause a system to:
accept a request, at a container on one or more web servers, from a user that interacts with a graphical user interface (GUI) of a web application;
map the request to a control tree factory, wherein the control tree factory [[can]] is operable to
          obtain an XML stream from different sources; [[and]]
          parse the XML stream into a Document Object Model (DOM) tree; and
          ~~process the DOM tree and~~ generate a control tree in the container ~~by the control tree factory~~ from the DOM tree based on the request, wherein the control tree is a logical representation of the graphical user interface (GUI), wherein the control tree includes a set of controls, each of which controls represents at least one of a graphical element and a functional element in the GUI;
associate at least one control in the control tree with another control in the control tree using an event notification mechanism, wherein the event notification mechanism allows the at least one control to register with the another control in the control tree for events that the another control raises;
advance the control tree through at least one lifecycle stage in a sequence of one or more lifecycles, wherein the at least one control in the control tree operates to be updated once the at least one control receives an event notification from the ~~interact with and produce a~~

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~~response based on the request~~ another control in the control tree through the event notification mechanism; [[and]]

aggregate the output of each of the set of controls to produce a response based on the request; and

provide the response to the GUI.

31.-32. (Canceled).

33. (Previously Presented) The machine readable medium of claim 30, further comprising instructions that when executed cause the system to:

create a metadata representation of the control tree; and

generate a class to construct the control tree based on the metadata representation.

34. (Original) The machine readable medium of claim 30 wherein:

the request is a hypertext transfer protocol request (HTTP); and

the request originates from a web browser.

35. (Previously Presented) The machine readable medium of claim 30, further comprising instructions that when executed cause the system to:

provide the response to a web browser.

36. (Original) The machine readable medium of claim 30 wherein:

the control tree is advanced through the at least one lifecycle stage by an interchangeable lifecycle component.

37. (Original) The machine readable medium of claim 30 wherein:

each one of the set of controls can have an interchangeable persistence mechanism.

38. (Original) The machine readable medium of claim 30 wherein:

each one of the set of controls can render itself according to a theme.

39. (Canceled).

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40.   (Original) The machine readable medium of claim 30 wherein:

one of the set of controls can advance through the series of at least one lifecycle stage in parallel with another of the controls.

41.   (Original) The machine readable medium of claim 30 wherein:

a lifecycle stage is one of: init, load state, create child controls, load, raise events, pre-render, render, save state, unload and dispose.

42.   (Previously Presented) The machine readable medium of claim 30 wherein:

the response is a hypertext transfer protocol (HTTP) response.

43.   (Original) The machine readable medium of claim 30 wherein:

controls can raise events and respond to events.

44.   (Original) The machine readable medium of claim 30 wherein:

each one of the set of controls can be one of: Book, Page, Window, Menu, Layout, Portlet, Theme, Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton, TreeView, TreeViewWithRadioButtons.

45.-49. (Canceled).

50.   (Currently Amended) The method of claim 1, wherein-further comprising:

allowing the one or more lifecycles of the control tree [[is]] to be provided and managed by the container and [[can]] to be modified by the container, and wherein one or more controls in the control tree can save their states at a particular stage in the one or more lifecycles and can then reload these states at a later stage in the one or more lifecycles.

51.   (Currently Amended) The method of claim 1, wherein-further comprising:

associating, via each container, associates a context object with the control tree factory, wherein each context object provide access to the protocol and application framework that is associated with that container.

52.   (Previously Presented) The method of claim 1, wherein:

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the control tree factory uses one or more meta data to construct statically created controls at initialization of the control tree, wherein dynamically created controls are created in the control tree in reaction to state, context, and events during a control tree lifecycle.

53.   (New) A method for supporting a portal application, comprising:

accepting a request, at a container on one or more web servers, from a user that interacts with a graphical user interface (GUI) of a web application at a client side;

mapping the request to a control tree factory, wherein the control tree factory is operable to

obtain an XML stream from different sources;

parse the XML stream into a Document Object Model (DOM) tree; and

generate a control tree in the container from the DOM tree based on the request, wherein the control tree is a logical representation of the graphical user interface (GUI), wherein the control tree includes a set of controls, each of which controls represents at least one of a graphical element and a functional element in the GUI, wherein at least one said control is a desktop control that contains one or more personalized view of the portal application, wherein the desktop control contains at least a booklet control and a look-and-feel control, wherein the booklet control represents a set of pages linked by a page navigator and the look-and-feel control determines the appearance of the one or more personalized view of the portal application;

associating the booklet control with the look-and-feel control using an event notification mechanism, wherein the event notification mechanism allows the look-and-feel control to register with the booklet control in the control tree for events that the booklet control raises;

advancing the control tree through at least one lifecycle stage in a sequence of one or more lifecycles, wherein the look-and-feel control operates to be updated once the look-and-feel control receives an event notification from the booklet control in the control tree through the event notification mechanism;

aggregating the output of each control of the set of controls in the control tree to produce a response based on the request; and

providing the response to the GUI.

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